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ABSTRACT

Graduate education, including graduate instruction, research, and public service, is a major set of activities for American universities. A pattern of financing for these activities has clearly emerged today that suggests that sponsored research activities and sponsored creative activity will be supported by social contributions, primarily from the federal government. Additional financing may be obtained from private philanthropy and from state government appropriations. The support of graduate instruction will be shared by the graduate student and by society. This sharing of the cost of graduate instruction varies among the state universities and the private universities. The trend in this decade will be for the graduate student share of the costs of graduate instruction in the public university to increase. Hopefully, a trend will also develop for the share of the costs of graduate instruction paid by the graduate student at the private university to decline somewhat. In this way, we shall continue to have a pluralism of graduate instructional programs with their varying emphasis upon research and practice. (Author/HS)

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SUPPLEMENT: FINANCING GRADUATE EDUCATION

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iews/notes digest for institutions of higher education
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WHO SHOULD PAY FOR GRADUATE EDUCATION?

In response to many requests, the MANAGEMENT FORUM is issuing this supplement to make available a paper by Dr. John D. Millett, Vice President and Director of the Management Division, Academy for Educational Development, prepared for a meeting of the Council of Graduate Schools in the United States, originally presented in New Orleans on November 30, 1972.

BY JOHN D. MILLETT

At first glance, it seems relatively easy to answer the question: who should pay for graduate education? Certainly, there should be little reason to provide any different answer for graduate education from that for undergraduate education. If it is appropriate, as so many persons in our society profess, that the costs of undergraduate education should be shared by both student and society, then surely it is equally appropriate that the costs of graduate education should be shared by student and society.

Indeed, it can be argued that a social investment in graduate education is even more important than a social investment in a general baccalaureate program in the arts and sciences, teacher education, and business administration. A good many persons in higher education institutions may disagree with this proposition. I cannot imagine that there would be many, however, who would want to dispute my basic proposition, that a social investment in graduate education is socially justifiable; even more, I believe such investment is socially essential.

At the outset, it is necessary to designate a specific definition of graduate education. One possible way of defining graduate education is to make the field conterminus with all post-baccalaureate education. Just as most of us in higher education are now supposed to adjust to the new label of post-secondary education, we might also try to adjust to the designation "post-baccalaureate" education. I would prefer, however, to suggest a somewhat more restrictive definition.

I think we may properly divide post-baccalaureate education into two parts: graduate professional education and graduate education. *Graduate professional education* is that post-baccalaureate education which builds upon a liberal arts base and which undertakes to achieve specialized professional objectives only at the post-baccalaureate level. The primary fields of study for such graduate professional education are law, medicine, dentistry, theology, veterinary medicine, and optometry. Although, in these last two mentioned fields, graduate professional education is not always strictly post-baccalaureate, the trend appears to be in that direction.

Graduate education, in contrast with graduate professional education, also seeks professional objectives, to be sure, but tends to build upon the base of an undergraduate specialization. The usual degrees of this graduate education are the Master of Arts, the Master of Science, the Doctor of Philosophy, and specialized designations. Graduate education in the arts and sciences and in such specialized fields as teacher education, business administration, agriculture, engineering, and nursing tends to continue an undergraduate concentration toward a more advanced level of knowledge and skilled performance.

Assuredly, there are universities with schools of business, schools of management, schools of social work, schools of library science, and schools of journalism which build upon a liberal arts base and which might well be classified as graduate professional schools. In addition, there are universities and scholars who would define graduate education exclusively as post-baccalaureate education in the arts and sciences.

In fact, we might further define post-baccalaureate education through three components: graduate professional education, advanced professional education, and graduate education in the arts and sciences. I hold no strong conviction about any particular definition. I insist only that we have an obligation to

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define our terms. And this discussion includes education at the master's and the doctor's degree levels, in both the arts and sciences, and in advanced professional fields within my definition of graduate education. With due recognition of the diversity which characterizes higher educational institutions in the United States, I believe I am utilizing a definition of graduate education which will accord with the practice of a majority of the universities belonging to the Council of Graduate Schools.

To return to my primary concern in this paper, who should pay for graduate education, let me underline the two basic issues involved. One is the cost of graduate education. The other is the distribution of this cost between student and society. I want to emphasize that we cannot separate the question of the distribution of cost from the issue of the cost itself, for two very important reasons. In a discussion of the distribution of the cost of graduate education between student and society, both parties to that distribution would want to know what the cost is. And, if universities expect student and society in some kind of juxtaposition to meet the costs of graduate education, we must be prepared to defend those costs. Higher education can no longer exist in this country merely upon a professional assurance by scholars and administrators that we know what we are doing. We shall have to demonstrate that knowledge and justify our expenditures.

At this point, it may be unnecessary to discuss the subject of the costs of graduate education in any detail. In this connection, I think we are fortunate to have available the cost-benefit data prepared by Powel and Lamson and published this past March by the Council of Graduate Schools. I think we are equally fortunate to have the commentary on this research prepared by Deans McCarthy and Deener and published at the same time.

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I am aware of some of the travail which accompanied this study. There are, of course, many complications in any effort to establish instructional costs. I wish to emphasize an important consideration. Institutions of higher education cannot expect increased funding and at the same time declare that it is not desirable or feasible to determine the costs of instruction. Underlining this statement is a brief provision of the Education Amendments of 1972, which became law when approved by the President on June 23. The new federal law adds to Title XII of the Higher Education Act of 1965 the following new section of law:

> Section 1206. The Commissioner may require as a condition of eligibility of any institution of higher education—
>
> (1) for institutional aid, at the earliest practical date, or
>
> (2) for student aid, after June 30, 1973, that such institution supply such cost-of-education data as may be in the possession of such institution.

I would assume that the Commissioner of Education will have to enforce this condition of eligibility or face considerable criticism in the Congress; it also seems likely that in order to obtain institutional aid and student aid funds, colleges and universities must have some well considered, meaningful data about their instructional costs.

There should be nothing startling about the cost data for master's degree programs or for doctoral degree programs reported by Powel and Lamson. The ranges of expenditure data for programs in similar fields are certainly to be expected, and the variations in the medians among various fields of study is a familiar situation. There are some aspects of cost data, however, which I want briefly to mention.

It is not enough to determine direct instructional costs. It is equally necessary to allocate a proportion of the overhead or indirect costs to the direct ones. There are various ways to make such allocations; the important consideration is that these overhead costs must be included as a part of total instructional expenditures.

Cost data require a unit of output. There is no satisfactory unit, I am convinced, except student credit hours of instruction. These student credit hours are then easily converted to a full-time equivalent student instructed on either an academic year basis or a year-round basis. The academic year seems to be the proper basis for cost data. For budget data, to be sure, year-round count of full-time equivalent students provided instructional service is needed. In this connection, we need to make certain that our curriculum offerings include appropriate course credit units for preparation of a master's essay and for the research essential to a doctoral dissertation.

A major complication in determining the costs of graduate instruction is the allocation of faculty time between undergraduate and graduate instruction. Apart from the appointment of faculty members who devote their energies exclusively to graduate teaching, there are two familiar means of achieving this allocation. One is a faculty service report in which the faculty member is asked to state the proportion of his work week devoted to undergraduate and to graduate instruction. The other method is to use a weighting scheme, presumably based upon some sampling of faculty reporting data. I have known such weighting to assign a unit of one to lower division student credit hours, two to upper division credit hours, and three to graduate instruction. This kind of weighting seems to be generally reasonable, provided there is some kind of empirical data base for it.

Another kind of cost problem is that of deciding how to recognize differentiations within graduate education. In their commentary, McCarthy and Deener identify three different levels of graduate instruction: the master's degree level, the candidate or specialist level, and the doctoral degree level. I should like to report my own conclusions on this subject.

As Chancellor of the Ohio Board of Regents for eight years, I directed a very carefully constructed resources analysis procedure based upon a uniform management information system which provided us with the input data for our computerized calculations. In turn, each year, I carried on some vigorous discussions with the graduate deans of eleven public universities about the meaningful interpretation of these data.

The graduate deans and I eventually agreed that in analyzing the costs of graduate instruction, it was satisfactory to recognize two levels rather than three. We also agreed that these two levels should not be labelled master's degree instruction and doctoral degree instruction. We decided to label them graduate instruction and doctoral instruction. We came to this conclusion because some departments offering a doctoral degree program encouraged very few, if any, of their students to take a master's degree, and because graduate students usually enroll in a wide variety of courses with a mixture of candidates for the master's degree and the doctoral degree. Indeed, we had to acknowledge the fact that most departments do not plan their general graduate course offerings in terms of a mas-

ter's or a doctoral candidate; they plan course offerings in terms of specialized subjects or particular parts of a discipline or professional field.

Furthermore, we recognized that a graduate student generally enrolls in graduate courses up to a total of 90 quarter credit hours. We then counted an additional 90 quarter credit hours for the doctoral degree, involving 45 credit hours of individualized or small group instruction and 45 credit hours of research instruction. I believe these decisions were reasonable as general guidelines in curriculum construction and in expenditure analysis.

It is commonly held that costs of graduate instruction vary with the quality of such instruction. Personally, I do not put much credence in efforts to measure or rank graduate programs in various fields by various universities. What these efforts accomplish, primarily, is to rank the prestige of particular faculty members at particular points in time, and these judgments about prestige may not correlate with quality. It is still possible for some graduate lights to be hidden or concealed by some institutional baskets.

I am impressed by the differentiation in graduate education objectives put forth in the McCarthy and Deener commentary on graduate costs. They propose that a distinction be made between the research-oriented and the practice-oriented graduate programs. I think this concept is useful; it applies both to graduate education in advanced professional study and to graduate education in the arts and sciences. When graduate education in the arts and sciences encompasses undergraduate teaching, it is a practice-oriented approach. I would hope that more of our planning and of our expenditure analysis might make use of this distinction.

Upon the basis of a great deal of experience, observation, and study, I am convinced that the basic reason for the differences in costs of graduate instruction are related to differences in the cost of the faculty input. I believe this difference is not so much the consequence of varying levels of faculty compensation, although this is surely a factor, as it is the consequence of varying levels of faculty workload. The kinds of workload standards carried by faculty members make a great deal of difference in the costs.

I recently had occasion to examine the faculty staffing pattern of a major private research university. The faculty members were generally expected to teach six credit hours of formalized instruction per semester. Most of these faculty members taught graduate courses; a great portion of undergraduate instruction was assigned to teaching assistants. Personally, I believe faculty workload expressed in terms of student credit hours is more indicative of actual faculty productivity than is workload expressed in terms of course credit hours. But however stated, workload or productivity has a great deal to do with the costs of instruction.

During my tenure as Chancellor for the Ohio Board of Regents, all of us concerned with public higher education carefully considered the size of faculty workloads we could reasonably ask the Governor and the General Assembly to finance. We fixed these workloads in terms of student credit hours, and the standards varied for general studies, technical education, baccalaureate general programs, baccalaureate professional programs, graduate programs, doctoral degree programs, and medical programs. For example, at the graduate level, we insisted that there be one full-time equivalent faculty position for each 150 student credit hours of output. This is the equivalent of 17 students enrolled per class in three classes for three credit hours each. At the doctoral degree level, we said that there should be one full-time equivalent faculty position for each 120 student credit hours. This was the equivalent of 14 students enrolled per class in three courses of three credit hours each.

The doctoral degree faculty workload was exactly one third of the workload fixed for student instruction in general studies, and one half the workload for student instruction in baccalaureate general programs. Our argument to the Governor and the General Assembly was that faculty members engaged in graduate and doctoral instruction were also expected to engage to a reasonable extent in research or public service related to their field of instruction. The argument was acceptable to the extent that in Ohio we avoided any legislative mandate on the subject of faculty workload. The General Assembly was content simply to endorse the standards of the Board of Regents.

Incidentally, faculty workload standards presuppose minimum enrollment in graduate instruction. In the absence of such enrollment, costs become excessive or must be absorbed as adjuncts of the cost of other instructional programs. Both practices have been used.

Many probably consider these faculty workloads to be unduly demanding. Workloads, however, are related to costs, and costs depend upon available income; that is, upon who is willing to pay how much for graduate instruction. Faculty workload, like faculty salaries, must be fixed in the context of acceptable costs *and* acceptable pricing, whether or not that pricing is for students or for society.

There is one aspect of university expenditure which I insist is *not* a cost of graduate instruction, the expenditure for graduate fellowships and for teaching assistantships. I am well aware that most instructional departments consider the availability of graduate fellowships and teaching assistantships to be an essential means for recruiting the desired quality and number of graduate students. Yet, fellowships must properly be regarded as a form of student financial aid, and teaching assistantships must properly be regarded as instructional compensation in the program where the position is assigned. Neither fellowships nor assistantships should be assigned automatically as a cost of graduate education to be recovered from graduate student tuitions and from social subsidies of graduate instruction.

At this point, it is important to make still another distinction, a distinction between graduate education and graduate instruction. Graduate education, indeed, higher education in general, embraces three somewhat different kinds of activities, which we customarily label instruction, research, and public service. These three kinds of activities have been designated the "primary programs" in the program classification structure of the National Center for Higher Education Management Systems. Graduate education involves graduate instruction but encompasses research and public service as well.

I think this distinction is important, both in the analysis of the costs of graduate education and in the determination of the financing arrangements. But before I further pursue this distinction, let me point out that considerations about the financing of higher education cannot be separated from issues about those who benefit from higher education.

The available literature as well as the uncertainties about this

whole matter of benefits are reviewed in the monograph by Powel and Lamson and in the commentary by McCarthy and Deener. Moreover, in the near future there will be a report from the Carnegie Commission on Higher Education on the subject of who benefits from and who should pay for higher education. All of us will eagerly await this important document.

In general, it is evident that the benefits of higher education accrue to both students and society. Also, there is a consensus about the identification of these benefits. The disagreements begin when we are asked to express these benefits in terms of dollars. And disagreement quickly becomes conflict when we attempt to base decisions about financing upon our judgments about the relative magnitude of these benefits.

For the individual student, the benefits of graduate instruction are the personal satisfaction of formal education carried to its highest potential development and the opportunity thus afforded to the graduate to earn more income in our economy based upon the use of this educated talent. In this latter connection, there are two factors to recognize. A study on the rate of return to individuals of their investment in higher education shows that this rate has in the past been lower for recipients of the doctorate than it was for recipients of the baccalaureate. Income in the labor market is related to the supply and the demand for educated talent. If we want to see rate of return on graduate instruction enhanced, we would do well to limit the supply of such talent well below its demand. That would certainly be the correct economic behavior, provided graduate education is motivated or influenced by economic considerations.

For society, graduate education provides benefits of various kinds: the preservation and transmission of the intellectual heritage of our culture, the advancement of knowledge, and the utilization of knowledge applied to promote the well-being and the general welfare of all citizens in our society. We have come to see that graduate education is essential to the operation of higher education itself, to our national security, to our health, to our economic development, to our ecological survival, to our social cohesion, and to our cultural enrichment.

In deciding who shall pay for the benefits of this graduate education, we might begin by examining the costs of sponsored research and public services performed by institutions of higher education.

Undoubtedly, the presence of sponsored research on a university campus has today created the research university. I would go a step farther and declare that sponsored research makes possible the research-oriented program in graduate education. The definition of a research university propounded by the Carnegie Commission on Higher Education is based upon the dual standard of number of Ph.D. degrees awarded and dollar volume of federal government research grants and contracts. I am disposed to believe that today a research-oriented program of graduate instruction, at least in the physical and biological sciences and in engineering, can only be provided in the university where sponsored research exists on a sizable scale.

It is evident that research to advance knowledge and the encouragement of creative talent are costs of graduate education to be financed by society. Notice that I say costs of graduate education. The benefits of research and of creative talent are primarily social benefits in my judgment. Therefore, these costs should be paid by society.

Sponsored research today in universities is being financed up to 75 or 80 percent by federal government agencies. Not all of this sponsored research is basic research; some of it is purchase of applied and developmental research from universities for direct use by government agencies, in programs such as space exploration or the development of atomic energy. Clearly, the future volume of research in our universities, together with the advancement of knowledge and the flowering of creative talent, will depend upon the volume of federal government financing. We can expect that much achievement in science, the humanities, and the creative arts which we in society are prepared to underwrite.

But social support of research and of creative talent is not dependent solely upon federal government financing. There are other available forms of social support: endowment and gift income earmarked for this purpose. Moreover, such general income from endowment and gifts and such appropriation support from state governments as is provided for graduate instruction may also support research and creative talent.

When a university fixes a limited or reduced workload for its faculty, it is supporting research and creative talent. I see no objection to this practice. I do suggest that a university would do well periodically to assess the output it is realizing from these general arrangements for the support of research and of creative talent. I suggest also that a university would do well periodically to ask itself whether or not the cost of its support for research and creative talent is outstripping its income from society for this support. And, I do suggest that a university would do well periodically to ask itself whether or not a more particularized approach to the support of research and creative talent would be more appropriate to the actual volume of output in these fields and more equitable to those who pay for graduate instruction.

Similar considerations apply to the financing of public service. Various publics and various enterprises in our society look to colleges and universities to perform various public services. Many individual faculty members may be called upon by outside groups such as voluntary associations, business enterprises, and governmental agencies to assist them in providing advice about how to perform certain tasks or about how to solve certain problems. The response of the individual faculty member to such requests for consulting assistance will depend upon his or her interests and other commitments, including the commitment to the college or university of which he or she is a part. Other public services may be performed through agencies or mechanisms of the college or university, such as public broadcasting, the operation of a museum, the exhibition or performance of special talent, the treatment of patients, the enrollment of persons in seminars or short courses of continuing professional education, the dissemination of advice about specified problems.

Again, I must express my own strongly held position that a college or university ought to undertake formalized endeavors to render public service only to the extent that these services are financed by consumer charges or by social contributions. Public service is an integral part of higher education. It is especially useful and apt to be particularly sought in connection with graduate instruction. But public service, like all other activities of higher education, has to be paid for, and the volume of such activity needs to be carefully related to the fi-

nancing available for this activity. I do suggest that a university would do well periodically to assess the outputs it is achieving from its general support of public service. I suggest also that a university would do well periodically to ask itself whether or not its support of public service activities is outstripping its resources for financing such public service. And I do suggest that a university would do well periodically to ask itself whether or not a more particularized approach to the support of public service would be more appropriate to the actual volume of output in this field of endeavor and more equitable to those who pay for graduate instruction.

At this point, then, we must find some kind of answer to the question of who should pay for graduate instruction. Let me say at once that if the principle of social funding of research and of creative endeavor within a university were accepted and practiced, and if the principle of restricting public service commitments to public service income within a university were accepted and practiced, then I think the cost of graduate instruction, including university overhead, could be brought within reasonable bounds. Certainly, all of us in higher education operation must become cost conscious in regard to graduate instruction.

Assuming we know the cost of graduate instruction at two or three levels of endeavor, and assuming we have clarified the research-orientation or the practice-orientation of our instructional programs, then we have to decide as a matter of policy and of practical need how we shall divide this cost between the student and society. The polar positions on this issue are simple to state. On the one hand, we may say that all the benefits of graduate instruction accrue to the individual student and that, accordingly, the student should pay the entire cost of graduate instruction. On the other hand, we may say that all the benefits of graduate instruction accrue to society and that, accordingly, society should pay the entire cost. Since most of us agree that the benefits of graduate instruction accrue to both the graduate student and society, we conclude both should pay the cost.

I must pause here to insert another important qualification in the consideration of the costs and the financing of graduate instruction. I have mentioned earlier the finding in the graduate cost study of the Council of Graduate Schools and of the National Association of College and University Business Officers that expenditures vary by discipline. It is not feasible, however, to enter into differential pricing of graduate instruction upon the basis of the particular program or discipline offered. For pricing purposes and even for state government appropriation purposes, we need to determine average costs and average charges. The distribution of average income among particular programs then becomes the task of budget management within a particular university.

In Ohio, during the current biennium ending June 30, 1973, the average expenditure per full-time graduate student for graduate study including university overhead was fixed at $3,300, and the average expenditure per full-time graduate student at the doctoral level including university overhead was fixed at $5,400. At the level of graduate study, the student was expected to pay $1,200 of this expenditure and the State of Ohio, $2,100. At the level of doctoral study, the student was expected to pay $1,200 and the State of Ohio $4,200. In the first instance, the student paid 36 percent of the cost and the state government 64 percent. For doctoral study, the student paid 22 percent of the cost and the state government paid 78 percent.

I believe that the distribution of payments between student and society in our state universities will undergo considerable change over the next several years. Increasingly we shall have differential pricing to students at the lower division level, the upper division level, and at the graduate level. Furthermore, I think we shall move toward the point where the distribution of costs between student and society at the level of graduate study will be approximately 50 percent to 50 percent, while the distribution at the level of doctoral study will be approximately 40-60.

Insofar as privately sponsored universities are concerned, I shall cite the current experience of another private research university whose expenditures I have had an opportunity to examine. At the level of graduate instruction, the expenditure per student averaged around $4,000 in the arts and sciences, and at the level of doctoral instruction, the expenditure per student averaged around $7,000. The graduate student paid 60 percent of the cost at the graduate instruction level; society, through endowment and gift income, paid the remaining 40 percent. At the level of doctoral instruction, the graduate student paid 35 percent of the cost and society paid 65 percent. But this private research university was operating at a deficit.

Apart from their efforts to reduce the costs of graduate instruction, I believe the private research university must increase the proportion of its costs paid by the graduate student. The alternative is to find increased social support for graduate instruction.

A third private research university carefully examined its cost and income situation and decided that it must have increased social support. It determined to embark immediately

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ACADEMY ANNOUNCES NEW PUBLICATION

The Academy for Educational Development now has available a new publication, as part of our continuing program to provide management and planning assistance to institutions of higher education.

Long Range Planning and Budgeting at Colleges and Universities, by Alvin C. Eurich, President, and Sidney G. Tickton, Vice President and Treasurer, Academy for Educational Development, is sixth in a series of Academy Papers. The authors urge, in light of the financial, social, and political crises currently confronting higher education, that institutions of higher education must take it upon themselves to develop a system of comprehensive, long-term planning. They describe what elements comprise an effective plan; one important tool is a long-range budget. The booklet offers valuable suggestions for carrying out this responsibility.

Single copies of this free book are available from the Academy for Educational Development's Washington office. (The address appears on the next page.)

upon a very substantial capital gifts campaign in order to raise its endowment by almost 100 percent. The preliminary planning for this campaign suggests that this particular university has a good chance of realizing its goal. Here is one way in which the social contribution to the costs of graduate instruction can be increased.

There is another choice. As the problems of cost and income have increased for graduate instruction, I have come to believe that graduate instruction ought to be financed on a national basis. I am well aware of the dangers involved in this procedure. As a former state government higher education planner, I am not overly enthusiastic about having a federal government planner for graduate instruction. The preferable arrangement would be for the federal government, through revenue sharing or through grants-in-aid, to provide state governments with funds to support graduate instruction in both publicly sponsored and privately sponsored universities.

I, for one, would like to see the time when privately sponsored universities have the option of obtaining the same social support for graduate instruction from all available sources as is provided the publicly sponsored university. If we do not arrange some such mechanism, then there are only two choices available to the privately sponsored university in financing graduate instruction. One choice is to increase social support through philanthropy. The other choice is to continue differential pricing to graduate students in terms of the pricing policies of publicly sponsored universities. In the long run, this particular kind of price competition between privately sponsored and publicly sponsored universities will surely be harmful to the survival of graduate instruction by the private university.

To be sure, as governmental financing of a part of the costs of graduate instruction increases, governmental planning and coordination of graduate instruction must inevitably follow. And after governmental planning and coordination will come governmental accountability. No one should have any illusions on this score. Governments which pay for graduate instruction will also direct and supervise graduate instruction.

How we shall finance the graduate student is a separate problem beyond the scope of this paper. It is not reasonable to expect the parents of the graduate student to finance graduate education, although in practice this does occur and will continue to occur. And some outstanding graduate programs would not continue to have graduate students if the universities involved did not find means to provide support to half, three-quarters, and even 90 percent of their graduate students. These universities have a particularly difficult problem when they must find the resources to finance graduate instruction *and* graduate students. In long-run terms, I see three primary methods for financing the graduate student. These are part-time employment—including part-time instructional and research duties in the university where the graduate student is enrolled—family support, including the earnings of a spouse, and loans.

SUMMARY

Graduate education, including graduate instruction, research, and public service, is a major set of activities for American universities. These activities are performed by our major research universities, by our other doctoral-granting universities, and by our comprehensive universities. These universities may be privately or publicly sponsored.

A pattern of financing for these activities has clearly emerged today which suggests that sponsored research activities and sponsored creative activity will be supported by social contribution, primarily from the federal government. Additional financing may be obtained from private philanthropy and from state government appropriations. The support of graduate instruction will be shared by the graduate student and by society.

This sharing of the cost of graduate instruction varies among the state universities and the private universities. The trend in this decade will be for the graduate student share of the costs of graduate instruction in the public university to increase. Hopefully, a trend will also develop for the share of the costs of graduate instruction paid by the graduate student at the private university to decline somewhat. In this way, we shall continue to have a pluralism of graduate instructional programs with their varying emphasis upon research and practice. I hope it is not too optimistic to expect this kind of future for such essential endeavors as graduate instruction, research and creative activity, and public service.

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